

## **REMARKS/ARGUMENTS**

Reconsideration of the current patent application is respectfully requested.

With respect to pending claims 1-3, 6-9, 12-15, 17-20 and 22, all were rejected. All claims 1-3, 6-9, 12-15, 17-20 and 22 were rejected under 35 U.S.C. §103(a) for obviousness over U.S. Patent No. 5,903,385, which issued May 11, 1999 to Y. Sugaya *et al.* in view of newly cited U.S. Patent No. 6,344,914, which issued February 5, 2002 to N. Shimojoh *et al.* Similarly, all claims 1-3, 6-9, 12-15, 17-20 and 22 were rejected under 35 U.S.C. §103(a) for obviousness over cited Sugaya patent in view of newly cited U.S. Patent No. 6,151,157, which issued November 21, 2000 to G. A. Ball *et al.*

With respect to the rejection of independent claims 1, 7, 13 and 18 over the combination of the Sugaya and Shimojoh patents, the Examiner stated:

“Regarding claims 1, 7, 13 and 18, referring to Figures 6, 7, 9 and 12, Sugaya discloses an optical power control system configured for use with a wavelength division demultiplexer, the optical power control system comprising:

“a plurality of photodetectors...

“a control system...

“wherein the control system (i.e., control circuit 44 and pump 45, Figs. 6, 7 and 12 sets a gain of the optical amplification system such that a power level indication based on the output powers monitored by the plurality of photodetectors is set within a desired range (see col. 7, lines 10-40).

“Sugaya differs from claims 1, 7, 13, and 18 in that he fails to teach an optical filter and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the monitored output powers is reduced. However, Shimojoh in US Patent No. 6,344,914 teaches an optical filter (20) (Fig. 12) and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the monitored output powers is reduced (see Fig. 12, col. 11, lines 16-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the optical filter and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the

monitored output powers is reduced as taught by Shimojoh in the system Sugaya. One of ordinary skill in the art would have been motivated to do this since Shimojoh suggests in column 11, lines 16-60 that using such an optical filter and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the monitored output powers is reduced has advantage of allowing providing a gain equalizer which will sufficiently flatten gain and reducing error signal.”

The applicants respectfully disagree. The purported combination of the Sugaya and Shimojoh references can only be viewed an improper assemblage of *ad hoc* elements for the rejection of the applicants’ claims. MPEP §2143 requires that “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.” In contrast, to the system of the cited Sugaya patent, the Examiner would add the gain equalizer elements of Shimojoh’s Fig. 12 because “a difference in the monitored powers is reduced.” However, as cited by the Examiner, the Sugaya system has already done this. “When the control circuit 44 receives the branched portions of the signal light components ch 1 to ch n, the control circuit 44 controls the output power of the light source 45 so as to equalize the light levels of ch 1 to ch n (underlining added).” Col. 7, lines 23-26. Why one would add the elements of the Fig. 12 gain equalizer from the Shimojoh reference into the Sugaya system to perform a function already achieved by the Sugaya system is unexplained. There is no motivation or suggestion to make the combination suggested by the Examiner.

Therefore, independent claims 1, 7, 13 and 18 are not obvious over the combination of the cited Sugaya and Shimojoh patents, and should be allowable.

Remaining claims 2-3, 6, 8-9, 12, 14-15, 17, 19-20 and 22 should be allowable for at least being dependent upon allowable base claims. Furthermore, at least some, if not all, of these claims are allowable in their own right. For example, claims 6, 12, 17 and 22 recite that “said control system sets a tilt of said optical filter to reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel,” or have similar language. In rejecting these claims, the Examiner stated:

“Regarding claims 6, 12, 17 and 22, the combination of Sugaya and Shimojoh teaches the gain control system sets a tilt of said tilt control filter to reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel (col. 11, lines 16-60 of Shimojoh).”

The applicants have perused the cited portions of the Shimojoh patent and find no such teaching. The description in the Shimojoh patent which the applicants did find, stated, “In Fig. 11, the transparency characteristics in a...band may be substantially equal to the reverse characteristics of the gain versus wavelength characteristics of an Al-high-density EDFA, with optical filters being used as a gain equalizer.” Col 10, lines 32-36. “Therefore, according to the above embodiment of the present invention, a controller (such as pumping-LD controller 16) controls optical filters of a gain equalizer to adjust the period, phase and/or attenuation degree of the waveforms of the transparency characteristics of the optical filters.” Col. 11, lines 50-55.

On the other hand, the applicants’ claimed invention simply “sets a tilt of said optical filter to reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel.” Hence it is evident that the Shimojoh patent does not teach the invention recited in claims 6, 12, 17 and 22.

Hence independent claims 1, 7, 13 and 18 and dependent claims 2-3, 6, 8-9, 12, 14-15, 17, 19-20 and 22 are all allowable over the combination of the Sugaya and Shimojoh patents.

In a similar fashion with respect to the combination of the Sugaya and Shimojoh patents, independent claims 1, 7, 13 and 18 were rejected over the combination of the Sugaya and Ball patents. In making this rejection, the Examiner stated:

“...Sugaya differs from claims 1, 7, 13, and 18 in that he fails to teach an optical filter and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the monitored output powers is reduced. However, Ball in US Patent No. 6,151,157 teaches an optical filter (i.e., gain equalizer module 24, Fig. 2) and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the monitored output powers is reduced (see Fig. 2, col. 3, lines 60-67, col. 4, lines 1-4, and 62-67, and col. 5. lines 1-10). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the optical filter and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the monitored output powers is reduced as taught by Ball in the system Sugaya. One of ordinary skill in the art would have been motivated to do this since Ball suggests in column 3, lines 60-67, col. 4, lines 1-5 and 62-67, and col. 5, lines 1-10 that using such an optical filter and control a tilt of the optical filter and set a tilt of the optical filter such that a difference in the monitored output powers is reduced has advantage of allowing providing a gain equalizer which will sufficiently flatten gain and reducing the error signal.”

Again, the combination of the Sugaya and Ball references can only be viewed an improper assemblage of *ad hoc* elements for the rejection of the applicants’ claims pursuant to MPEP §2143. As pointed out above, the Sugaya system already equalizes the light levels of the different channels. Why one would add a gain equalization module (24) from the Ball reference into the Sugaya system to perform a function already achieved by the Sugaya system is unexplained. There is no motivation or suggestion to make the combination suggested by the Examiner.

Therefore, independent claims 1, 7, 13 and 18 are not obvious over the combination of the cited Sugaya and Ball patents, and should be allowable.

Likewise, dependent claims 2-3, 6, 8-9, 12, 14-15, 17, 19-20 and 22 should be allowable for at least being dependent upon allowable base claims and at least some, if not all, of these claims are allowable in their own right. Claims 6, 12, 17 and 22 recite that “said control system sets a tilt of said optical filter to reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel,” or have similar language. In rejecting these claims, the Examiner stated:

“Regarding claims 6, 12, 17 and 22, the combination of Sugaya and Ball teaches the gain control system sets a tilt of said tilt control filter to reduce a

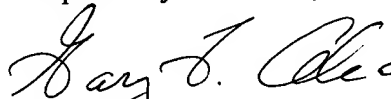
difference in monitored output powers for a highest WDM channel and a lowest VWDM [sic] channel (Fig. 2 of Ball).”

With due respect to the Examiner, Fig. 2 shows nothing more than the amplified signal, after passing through the gain stage (G) 20, gain flattening module (GFM) 22 and gain equalization module (GEM) 24, has the amplitude of each of its constituent channels 12 equalized. “The loop status monitor 28 determines the amplitude of each channel and generates the corresponding control signals provided to the gain equalization module. Each of the control signals are representative of the degree of attenuation required to equalize the output signal of the amplifier (underlining added).” Col. 3, line 67 to col. 4, line 5. On the other hand, the applicants’ claimed invention simply “sets a tilt of said optical filter to reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel.” Hence it is evident that the Ball patent does not teach the invention recited in claims 6, 12, 17 and 22.

Hence independent claims 1, 7, 13 and 18 and dependent claims 2-3, 6, 8-9, 12, 14-15, 17, 19-20 and 22 are all allowable over the combination of the Sugaya and Ball patents.

Therefore, in view of the remarks above, the applicants respectfully request that the rejections be withdrawn, that claims 1-3, 6-9, 12-15, 17-20 and 22 be allowed, and the case be passed to issue. If a telephone conference would expedite the prosecution of the application in any way, the undersigned attorney asks that the Examiner call the undersigned at (408) 446-7687.

Respectfully submitted,



Gary T. Aka  
Reg. No. 29,038

RITTER, LANG & KAPLAN LLP  
12930 Saratoga Ave., Suite D1  
Saratoga, CA 95070  
Tel: 408-446-8690  
Fax: 408-446-8691